Au Virtual International Conference 2020
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
October 30, 2020
Co-hosted by

The Opportunities for Virtual Tourism During Social Distancing

Naruemon Sirisungsuchol

592/3 Soi Ramkhamhaeng 24 Ramkhamhaeng Rd., Hua Mak, Bangkok

E-mail: naruemon.siri@gmail.com

Abstract

The aimed of this study was to find out whether virtual tourism would have a chance to become more well-known and able to help booting tourism business during social distancing. Researcher used qualitative method to collect and analyze data. The in-depth interview was used in order to collect data from 16 domestic tourist who visited main attraction in Bangkok and countryside. The data was collected from Jun 21 - July 1, 2020. Then, researcher used thematic analysis method to analyze data by coding the key word of informants into category. As the result from the analysis, it showed that there are not many people know about virtual tourism and they never try using virtual reality for travel. The preferred destination in Bangkok that informants would like to visit by using virtual reality are nature attraction, adventure attraction, famous temple and museum. Moreover, tourist would like to try virtual tourism to gain a new travel experience and be safe at home during social distancing. Virtual tourism is type of the tourism that provide activity for tourist to enjoy in their free time while staying at home. Therefore, tourism business can still keep contact with their customer. It creates the desire of people to visit the destination after pandemic.

***Keywords*:** Augmented Reality, COVID-19, Social Distancing, Virtual Reality

Au Virtual International Conference 2020
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
October 30, 2020
Co-hosted by

Introduction

Since start of 2020, the COVID-19 has rapidly-spread from China and created global pandemic, devastating the world economy unprecedented scale. The restrictions on mobility have been affected on a local, regional and global scale. Numerous of places have been shut down such travel attraction, restaurant, airport and supermarket. The movement restrictions have been implemented on everybody and everywhere which has practically stopped the tourism economy in communities throughout the world. Most of the places have been facing lockdowns state which varying lengths the economic effect of COVID-19 pandemic has devastating. The effects from pandemic on the tourism industry is bad, impact more than hundreds of travel destinations is out reach physically due to lockdown. All tourist attractions, accommodation, museums, beach and even restaurants have been closed. Every activities and sports are pause and events have been suspended or even cancelled. The situation of tourism sector is facing with pandemic are unprecedented. From this situation, it can lead in two possible outcomes. First, business sector could go back to the normal way as a pre-crisis. Another one is that this situation can entails a new way of doing things (Loorbach, 2017). Currently, from the pandemic of COVID-19, it is hard to go back to a normal way of doing things (Miles, 2015).

From this pandemic of COVID-19, it leads to a new way of traveling where tourist's mobility is most important. Due to pandemic of COVID-19, tourists are unable to go out to travel, they are forced to stay home and follow rules and regulations. With all the rules and regulations that restrict people to keep the social distance from other people, a lot of people have stop traveling or only visit the domestic destination (Lake, 2019). The possibility after post-pandemic, travel attraction will start to recover, but unknow destination will become more attractive to tourist. This is the time where tourist would enjoy their journeys rather than the destination itself. It's called slow tourism (Travelzoo, 2020).

The traditional way that people used to travel is that they need to have time and money than they would plan for trip which normally will be several days. The primary concern of tourism business is tourist's safety. However, during this pandemic, technology or electronic device can provide and ensure the safety of people. One of the technologies which is called virtual reality can provide the opportunity for interaction experience. This virtual reality technology can support both tourism business and tourist. In tourism industry, people use the internet to find travel information, do the hotel and airline booking, or even reserve space or travel attraction. It's saved time and reduce cost of travel by using the technology to manage the travel plan. The internet will keep growing as the increase of online booking grown faster due to easy access to the high-speed internet. So, online travel has been viewed as central of internet marketing and e-commerce in tourism sector (Wang, 2004). Virtual reality and augmented reality have impacted on tourist decision making as it relates to buying decisions on tourism product. Augmented Reality is a technology which create the image of user by using computer graphic, this image will present the user view of the real world. Also, virtual reality is the technology that create the virtual elements through computer graphics (Lister, 2008). These technology help improve tourism activities by listing the tour agents on the internet which tourist can look for travel information from them and made decision on tourism product (Huang, 2016). Virtual reality technology provides the opportunity for tourist to virtually transported to many attractions. It could give the understanding of tourism products or experience which could impact the searching process of tourist

The purpose of doing this research is to found out about:

RQ1: Whether Covid-19 pandemic situation will accelerate digital transformation at hospitality and travel company in Bangkok?

RQ2: In what ways do digital technologies, specifically VR and AR technologies, impact different stages of a high involvement consumer decision-making process in Bangkok?

RQ3: Will digital technologies, specifically VR and AR technologies, serve as a source of competitive advantage for tourism in Bangkok during social distancing?

RQ4: Will the virtual tour help be boosting tourism industry during social distance situation in Bangkok?

Literature Review

The Persuasive of Virtual Reality

Virtual reality (VR) refers to the use of 3D mapping technologies and sensors that react to user engagement, these VR displays enable individuals to experience a virtual walkthrough of actual places around the world, such as taking virtual trips to tourist attraction or virtual hikes through national parks. VR allows for subjective experience whereby stimuli such as virtual walkthrough or sightseeing or museum can eventually translate into real behavior. This research focus on two areas: presence and

Au Virtual International Conference 2020
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
October 30, 2020
Co-hosted by

transportation theories. Presence focuses on how well computer-generated environments induce the feeling of being in the world that exists outside the self (Riva, 2004). The presence in virtual environments (VE) includes the user's sense of being there, the extent to which the VR experience becomes more real than everyday experience. Second is transportation. Transportation theory applies in VR to the state of being transported into the virtual world through imagery with the context serves as a story and self as a character (Kim, 1997). There are two factors of transportation: arrival which referred to a feeling of being present in the mediated environment and departure which referred to a feeling of separation from the physical environment.

Opportunities for Virtual Reality in Tourism

The tourism business has many options for natural tourism. For example, nature tourism. The natural tourism experience has many challenges with providing high quality services. Mostly, destination is isolated from the main city or the crowded area, tourist who travel to this kind of destination or unfamiliar places need to follow rule and regulation of safety before entering to destination. It requires the specialist to guild and brief about do and don't in the attraction. This safety method can attract tourist to try VR before really going to original attraction. It could capture tourist attention and make them satisfy with VR technology.

Advanced Technologies for Tourism and Tourist's acceptance of New Technologies

Web-based technology can encourage the user to visit the various types of attraction. This technology can help rebuilding the travel destination such as objects or scenarios by using 3D graphics and VR and AR technology. It is difficult for people to evaluate travel attraction because of the intangible of tourism product. (Ye, 2011). The virtual rebuilding of travel attraction could solve this issue by offering a detailed 3D image and their interaction in the program. This technology program could enhance the tourist feeling of being exits in the travel attraction. The increase in medias of virtual reality in which tourists are characterized by avatars create the opportunity to travel with 3D image with multi-modal inter faces. According to (Pantano, 2009), virtual reality making a unique way of traveling, customized tourism product, improving tourist' experience and recording tourist' behavior. Web-based technology is improving tourist's experience and can also be a tool to gaining a competitive advantage from other travel attraction. Therefore, VE could make it easier the remember travel attraction

and travel information which could affect tourist's satisfaction on traveling.

Consumer Decision-Making and Technologies

According from Nicosia, consumer decision making in a purchase context can be divided into four stages: information provided by an organization to a consumer, use of the information by the consumer to form preferences and attitudes, a purchase decision and then feedback about the purchase (Nicosia, 1966). This research studied the various ways digital technologies, specifically VR and AR, are perceived by consumers to impact the different stages of the model. Technologies enable consumers to move beyond simply gathering more information about a product or service to experiencing elements of the product and service. In a tourism context, use of VR experiences such as 360-degree videos result in greater likelihood of consumers wanting to visit a destination (Gibson, 2018).

Role of Electronic Commerce

The improvement and growth of electronic commerce give an opportunity for marketing on tourism business. The potential of virtual reality creates new way of tourism activity which tourist able to travel through electronic device to various types of travel attraction. The rising awareness in a new form of organization can referred to virtual organization (Davidow, 1992). Virtual organization can refer to a link among companies, suppliers and customers. It provides the link of information which could share the skills, budget, and information of other's markets. Virtual organization have no central office, it can operate from anyway (Byrne, 1993). It operates the business through structures and processes which are fast, flexible, and flat. It is transforming the information into knowledge without having a physical infrastructure. The increasing of tourist able access to the information lead to the growth in tourism business. (Kate, 1998). Also, tourist benefit from getting the up-to-date information with the low cost. (Pollock, 1996). Moreover, travel attraction can get advantage from the virtual organization. It can maintain or even increase their market share and create close relationship with customer which could lead to customer satisfaction (Sussmann, 1996).

Place Attachment and Virtual Reality Attachment

There are four stages on the VR technology: 1) pure real presence, 2) augmented virtually, 3) augmented reality. 4) pure virtual presence (Wang et al., 2018). Tourism business allow tourist to experience the VR

Au Virtual International Conference 2020
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
October 30, 2020
Co-hosted by

program. It makes them forget time and focus on travel experience processes instead of results from traveling. The improving of tourist experience creates the visibility of the immersion concept. Thus, immersion is the key components that could lead to tourist's satisfaction. The starting point of tourist when using VR technology is to explore the travel attraction. The effectiveness, efficiency and satisfaction of VR technology come from feeling the sense of being in the attraction which tourist could learn and travel freely all over the attraction. (Costabile, 2001).

Place attachment is a media that provide travel attraction which meet the need of the tourist. It could satisfy people by provide various type of famous destination. The interaction between the tourist when travel at place on the VR program can determining the relationship between people and places (Nielsen-Pincus, 2010). Conversely, VR attachment could connect the emotion between tourist and VR technologies.

Methodology

In this study, researcher used qualitative method to collect the data. This method was chosen because it was giving information in more detail which provide the data in the form of rich verbal interactive Researcher used in-depth interviews to collect the data from informants. The primary purpose is to hear from informants about their opinion on the opportunity for virtual tourism during social distancing. The informants were randomly selected at destination site. There were 19 open-ended questions which was asking about virtual tourism such as what kind of technology feature do you think will gain people awareness during social distancing? what kind of attraction do you think will make you pursue virtual tourism? which attraction in Bangkok would you like to travel using virtual reality? Informants had to answered questions by providing the opinion, telling experience or making some reaction toward those questions. It's generally covered the duration of at least 30 minutes. In order to have the interview data captured more effectively, researcher recorded the conversation during the interview. Researcher asked for the permission from informants before the interview started. The audio record of the interview made it easier for the researcher to focus on the interview content. By using this method, it helped researcher to collect depth information about virtual tourism from tourist point of view

Researcher used the in-depth interview to collect data from 16 domestic tourists between June

21, 2020 to July 1, 2020. Target tourists were divided into 2 groups. The first group was 11 domestic tourists who visited famous attraction at the countryside; Ranong province, Prachuap Khiri Khan province and Chonburi province. The second group was 5 domestic tourists who visited at famous attraction in Bangkok; Terminal21, Chatuchak Market and Grand Palace. Then, researcher used thematic analysis method to analyzed data by coding the key word of informants into category.

Results and Discussion

To anticipate the digital transformation in tourism industry in Bangkok

Figure 1: Digital transformation in tourism industry
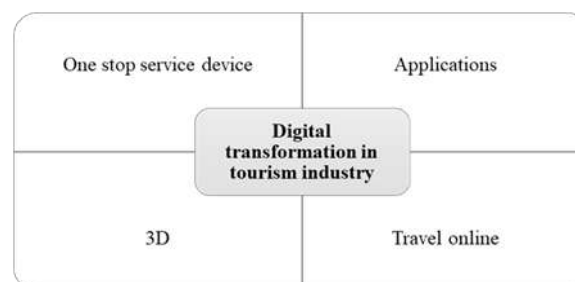
Digital transformation has been giving a deep impact on many industries such as, banking, hotel, airline, healthcare, insurance and many more. In tourism industry, tourist makes use of both information and transactions in all stages of the value chain, tourist finding for the information before travel, compare and check feedbacks, reserve tickets, hotels, as well as request a virtual tour of their potential destination.

From the result of data collection, tourists are looking for one single device that can do anything including travel online. Mobile is the most selected device that informants would select to travel online. They prefer using mobile phone and access to an application. Virtual tour could be one of an application in the mobile phone for tourist to travel online. They would prefer advance technology such as 3D to travel with VR, the quality of the image need to be close to the real destination. Therefore, it needs to provide many types of destinations to be able to attract the user.

To study the impacts of VR and AR technologies on consumer learning, satisfaction and consumption intent in Bangkok.

Au Virtual International Conference 2020
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
October 30, 2020
Co-hosted by

Figure 2: The impact of VR and AR on tourist

Virtual reality is becoming important part to attract tourist and also provides an alternative for someone who can't visit the destination in person due to financial crisis, time restrictions and social distancing. VR lets the tourist experience new way of traveling by invites people to explore destination no matter where they are in the world. Created using 3D, a beautiful soundtrack and changing seasons, this 360-degree platform is set to become even more complex and immersive, with the aim being to allow friends to meet up in the simulation and wander around together in real time.

Refer to figure 2, there are several impacts of VR and AR on tourist. First one is travel experience, tourist would want to try using VR for traveling. However, they expect to get the feeling of really being in the destination. VR need to provide the experience of fun, learning something new from the destination and real time in order to meet tourist's expectation. Second is travel plan, due to pandemic of COVID-19, people don't want to go travel but will use VR to observe the destination then plan for the future trip. Third is support tourist's decision making, after observing the destination by using VR, they will make the decision do the travel plan according to their satisfaction from VR. Therefore, tourism business or VR provider will know tourist's preference on travel destination and use this information to get the new media to support the program.

To find out whether digital technologies can help the attraction in Bangkok gain a competitive advantage over other attraction during social distancing.
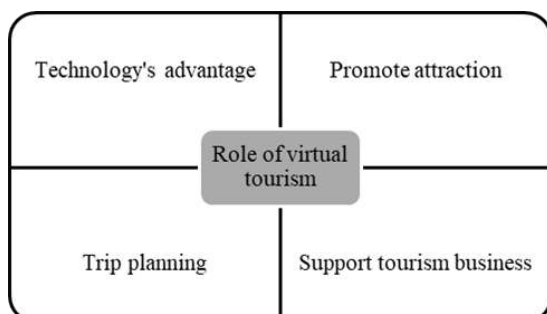
Figure 3: Virtual tourism in Bangkok during social distancing
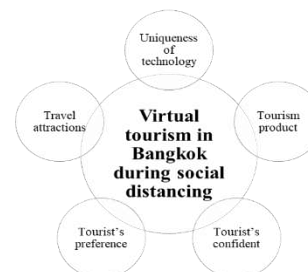
Refer to figure 3, virtual tourism in Bangkok during social distancing. Due to pandemic of COVID-19, virtual tourism can help people enjoy their time while staying at home. They can use VR to travel online and get new experience of traveling. To travel with this kind of technology, the quality of VR needs to be advance. They expect to see 3D model or even 4D to get to feeling of visiting the destination. The device that use to access VR need to be simple to use, the sound and image should provide the advance quality. According from one of the informants, she would like to purchase the local product from the destination that she visits from the program. This unique feature could attract people to travel on VR. Also, from the result of data analysis, people prefer to go to nature and adventure attraction. This is mean, from the tourist point of view, the tourism product that would attract people to travel on VR in Bangkok should be attraction or destination, follow by the accommodation that help them to plan for their future trip. The travel attraction that people would to visit in Bangkok are nature attraction, adventure, museum, and famous temple. They would feel safe to travel on VR because they can avoid physical contact and keep distance from other people. Also, due to the recession period, using VR program to travel would help them save money. Moreover, according from informants, VR can apply on attraction, accommodation, restaurant, and activities, it's depended on their preference.

To study the role of virtual tour as a means to boost tourism industry during social distance situation in Bangkok.

Figure 4: Role of virtual Tourism

Au Virtual International Conference 2020
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
October 30, 2020
Co-hosted by

According from figure 4, the result from data analysis provide the idea of technology's advantage, promote attraction, trip planning and support on tourism business on role of virtual tourism.

1) Technology's advantage: VR technology need to connect people together and able to travel online with a group. This technology can be a guideline for tourist to plan their future trip.

2) Promote attraction: Using VR to promote travel attraction by showing the highlight of each city attraction including the local product to attract tourist to shop online.

3) Trip planning: According from informants, they will VR to plan their future trip by looking at destination and hotel on VR program. They will go to the destination that they impress from VR. This method saves time and money of tourist; they will only go to the destinations that they like.

4) Support tourism business: Tourism business can promote destinations and inspire customers to travel on VR and keep in touch with their customer. It offers a new way to engage with their customer.

Recommendations

1) Electronic device or program use for virtual tourism should be easy to access, and simple to use. There is wide length of ages who would like to travel by using technology, the difficulty and complicated to the program will made it less attractive to try.
2) Electronic device that use for virtual tourism should be mobility and convenient to carry to everywhere. It should connect to the VR program by using only one device. This electronic can be mobile phone, so that tourists don't need to invest on additional device.
3) Due to pandemic of COVID-19, the economy is getting worse. Thus, the price of the product or the cost of install the program should be reasonable. Most people will buy it because of its worthiness.
4) Tourism business can promote VR by providing the highlight of attraction in the city to attract tourist

to use VR to travel. After virtual tourism become well known, add the hidden destinations to the program. So, tourists could explore all the city and they might want to visit the original place.
5) Beside showing the destination, tourism business should provide tips or information for tourist to learn such as direction, beliefs, culture, do and don't, manner when visiting the destination.
6) Most people don't know about virtual tourism. So, tourism business should create awareness by doing the advertise, have a trail period before people invest in VR.
7) Instead of watching destination via VR, people would like to interact or make a movement like playing game or doing activities. Using VR to travel online with their friend or family and able to communicate and make a move would give higher tourist's satisfaction.

Conclusions

There aren't many people know about virtual tourism and they never heard about it before. Also, they never using virtual reality in their daily life. Some of them had try VR when looked for attraction or accommodation. They went to World wide web, search for the attraction and watched 3D, listened to sound of narration. During social distancing situation, most people had no plan for traveling, they need to stay home and work online. The technology that can help them do the activities from home will become more popular. Specially, one stop service device is becoming needed item. They looking for the device that can work, chat, call, play game in one single device.

Most people would read the reviews, comments, and recommendations on social media before they making decision on traveling. Also, most of them prefer to travel with the group of friends and family rather than using VR and travel alone. The virtual reality needs to give the real feeling of being at the attraction to tourist and provide the new and different experience from normal tourism to traveler. Nature and adventure attraction are the most preferred for tourist to pursue on virtual tourism. They want to see the good quality image of 3D and 4D. The technology needs to be easy to access and simple to use. Also, when apply VR on the attraction, better include the shopping online feature to show the local product of each cities. Therefore, VR is most recommended for accommodation. VR can show every part of room and the surrounding area. It helps tourist to make decision when booking the accommodation. Also, most selected attraction in Bangkok is temple and landmark attraction. Also, the

Au Virtual International Conference 2020
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
October 30, 2020
Co-hosted by

crowded areas are preferred to use with VR to avoid physical contact and save time from traffic.

Future Research

In this study, research focused on the opportunity of virtual tourism during social distancing in Bangkok. Its emphases only applying VR technology on tourism sector. However, due to the time limit and pandemic of COVID-19, researcher could collect data from domestic tourist that provide the result on travel expectation and travel experience, role of virtual tourism, the impact of VR on tourist, and the opinion of digital transformation. The result only showed the tourist point of view toward virtual tourism. For future research, researcher could include the tourism business and international tourist point of view to show the clear picture of the opportunity for virtual tourism. Also, to include the drawback of using VR for travel in the future research.

Acknowledgments

References

Byrne, J. (1993). The virtual corporation. *Business Week*, pp. 98-102.

Costabile, M. (2001). *Usability in the software life cycle.* Singapore: World Scientific Publishing.

Davidow, W. a. (1992). *The Virtual Corporation.* New York: HarperCollins.

Gibson, A. and O'Rawe, M. (2018), Virtual reality as a travel promotional tool: insights from a consumer travel fair, *Augmented Reality and Virtual Reality*, Springer, Cham, pp. 93-107.

Huang, Y. B. (2016). Exploring the implications of virtual reality technology in tourism marketing: an integrated research framework. *International Journal of Tourism Research*, pp. 116-128.

Kate, N. (1998). Surfing for travel. *American Demographics*, pp. 36-37.

Kim, T. &. (1997). Telepresence via television: Two dimensions of telepresence may have different connections to memory and persuasion. *Journal of Computer-Mediated Communication*.

Lake, Z. &. (2019). National parks officials grappling with high volume as Instagram tourism booms.

Lister, M. D. (2008). *New Media: A Critical Introduction.* Routledge,Abingdon.

Loorbach, D. F. (2017). Sustainability transitions research: transformingscience and practice for societal change. *Annual Review of Environment and Resources*, pp. 599–626.

Miles, L. &. (2015). Entrepreneurial resilience: Role of policy entrepreneurship in the political perspective of crisis management. *Understanding Political Entrepreneurship*, pp. 67-81.

Nicosia, F. (1966). *Consumer Decision Processes: Marketing and Advertising Implications.*

Nielsen-Pincus, M. H. (2010). Sociodemographic effects on place bonding. *Journal of Environmental Psychology*, pp. 443-454.

Pantano, E. a. (2009). Learning cultural heritage through information and communication technologies: a case study. *International Journal of Information Communication Technologies and Human Development*, pp. 68-87.

Pollock, A. (1996). The role of electronic brochures in selling travel: implications for businesses and destinations. *Australian Journal of Hospitality Management*, pp. 25-30.

Riva, G. W. (2004). The layers of presence: a bio-cultural approach to understanding presence in natural and mediated environments. *CyberPsychology & Behavior*, pp. 405–419.

Sussmann, S. and Baker, M. (1996). Responding to the electronic marketplace: lessons from destination management systems. *International Journal of Hospitality Management*, pp. 99- 112.

Travelzoo. (2020). Travelzoo U.S. Survey Reveals Flexible Travellers Find Opportunity in Current Crisis Climate.

Wang, P., Wu, P., Wang, J., Chi, H.L. and Wang, X. (2018), A critical review of the use of virtual reality in construction engineering education and training, *International Journal of Environmental Research and Public Health*, pp. 1-18.

Wang, Y. Y. (2004). Toward understanding members' general participation in and active contribution to an online travel community. *Tourism Management*, pp. 709-22.

Ye, Q. L. (2011). The influence of user-generated content on traveler behavior: an empirical

Au Virtual International Conference 2020
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
October 30, 2020
Co-hosted by

investigation on the effects of the e-word-of-mouth to hotel online bookings. *Computers in Human Behavior*, pp. 634-639.